

South Carolina Housing Needs Assessment



Appendix to Volume 1: State Overview

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About SC Housing

The South Carolina State Housing Finance and Development Authority (SC Housing) is a self-sustaining agency committed to ensuring that South Carolinians have the opportunity to live in safe, decent, and affordable housing. SC Housing operations are supported by a funding base that includes fees and other revenue earned through the administration of agency programs.

Vision

All South Carolinians have the opportunity to live in safe, decent and affordable housing.

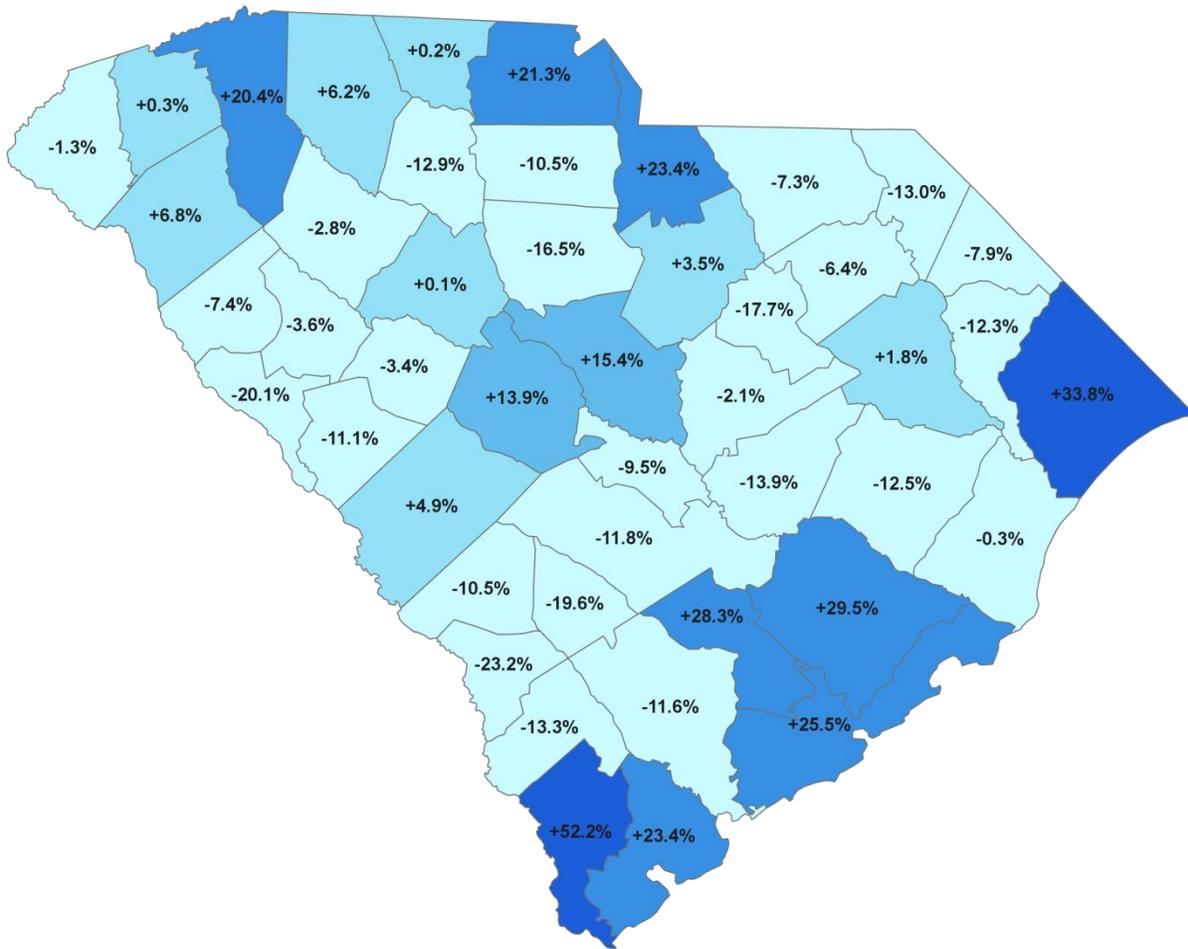
Mission

Create quality affordable housing opportunities for the citizens of South Carolina.

Additional State and County Data

The population of South Carolina is expected to grow to over 5.7 million by 2030. Most counties will lose residents, however, while urban and coastal areas will experience rapid growth.

Exhibit 1: Projected Population Change by County, 2018-2030

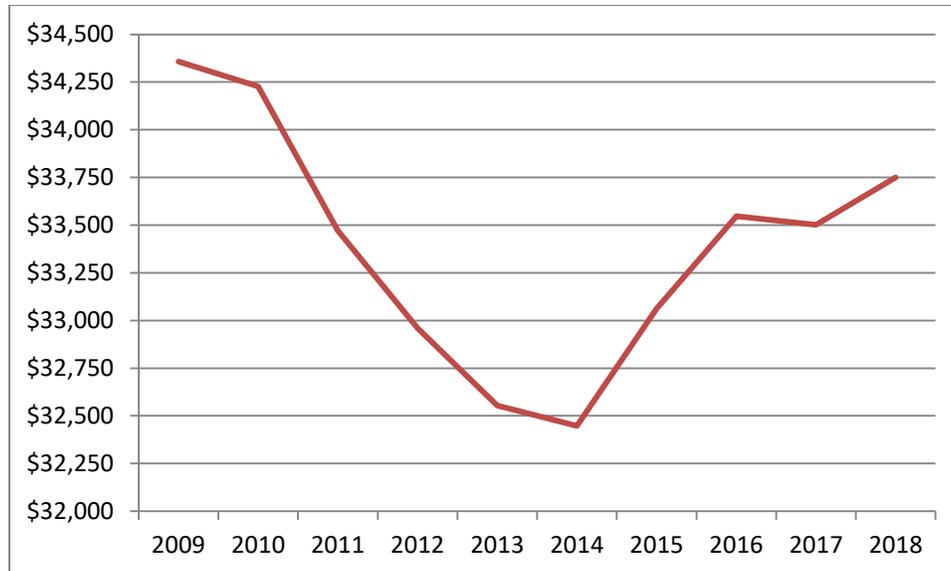


Sources: U.S. Census Bureau Population Estimates, South Carolina Statistical Abstract

According to the Revenue and Fiscal Affairs Office, the state is expected to have a population of 5,730,490 by the year 2030, an increase of 13 percent from 2018 estimates. This growth will not be distributed evenly throughout the state, however. In fact, 27 of 46 counties, largely rural in character, are expected to lose residents in this time; the most severe projected decline is in Allendale, where the population will decrease by 23 percent, with McCormick and Bamberg also projected to lose one out of every five residents. Meanwhile, most urbanized and coastal counties are expected to see substantial increases. Jasper (52 percent), Horry (34 percent), and Berkeley (30 percent) Counties have the highest projected growth.

Despite strong economic growth and a low unemployment rate, wage growth is not keeping up with inflation.

Exhibit 2: State Median Inflation-Adjusted¹ Annual Wage, 2009-2018



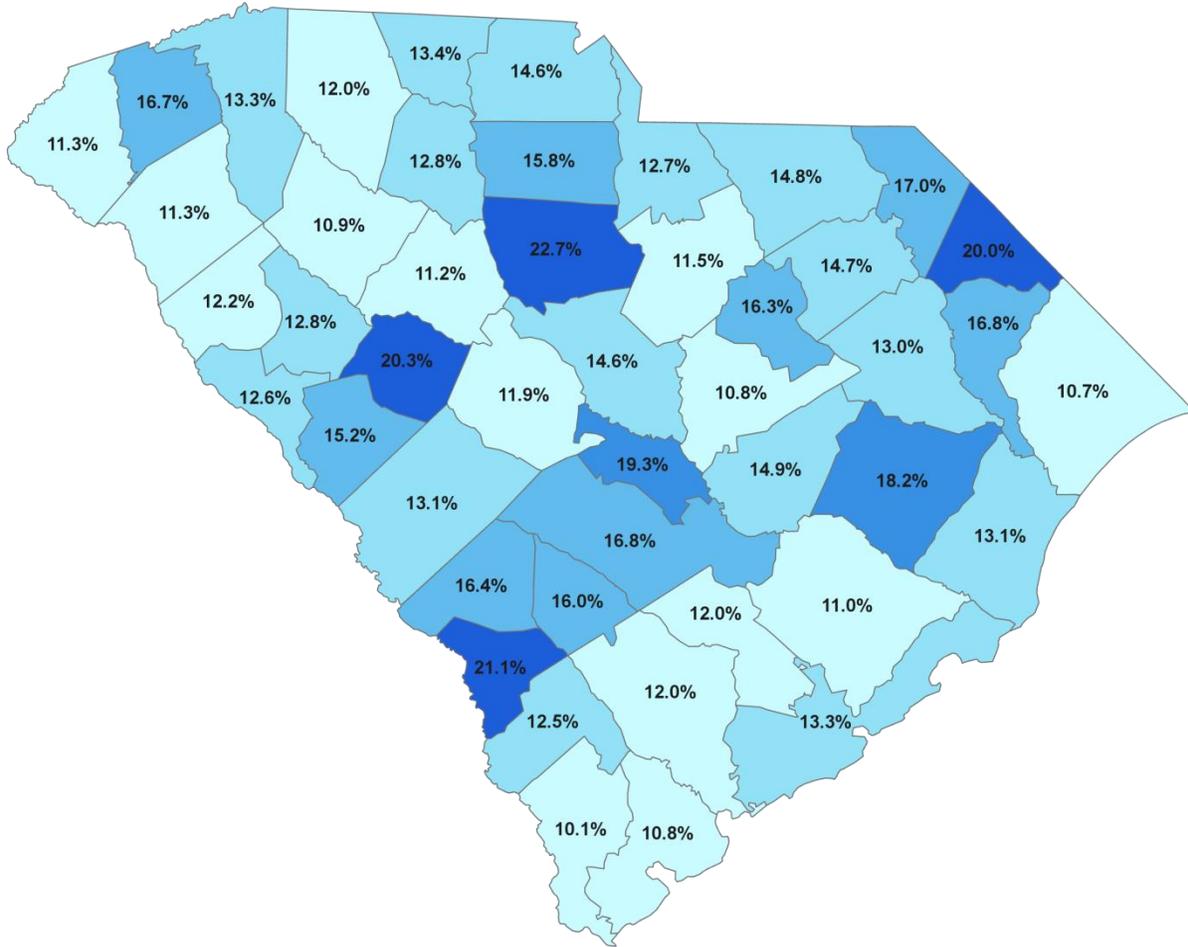
Source: Occupational Employment Statistics data via SC Works

While South Carolina has a low unemployment rate, the current labor market is not supporting robust wage growth to make housing affordable. According to SC Works and the U.S. Bureau of Labor Statistics, the state unemployment rate was 3.4 percent in 2018; rates by county ranged from a low of 2.8 percent in Charleston to a high of 6.5 percent in Bamberg. Overall, this suggests incredibly high demand for workers. Despite this, wages have not recovered from the Great Recession. The median South Carolina worker earned only \$33,750 in 2018, which is still below the 2009 figure after adjusting for inflation (\$34,358). So while nearly all South Carolinians who want to work can do so, they are often losing ground relative to the prices they pay for basic expenses, chief among them housing.

¹ Inflation computed using the Consumer Price Index. Figures in the chart are in 2018 dollars.

One quarter of South Carolina renters are considered extremely low-income, meaning that they earn no more than 30 percent of the area median income (AMI).

Exhibit 3: Share of Households Classified as Extremely Low-Income by County, 2011-2015

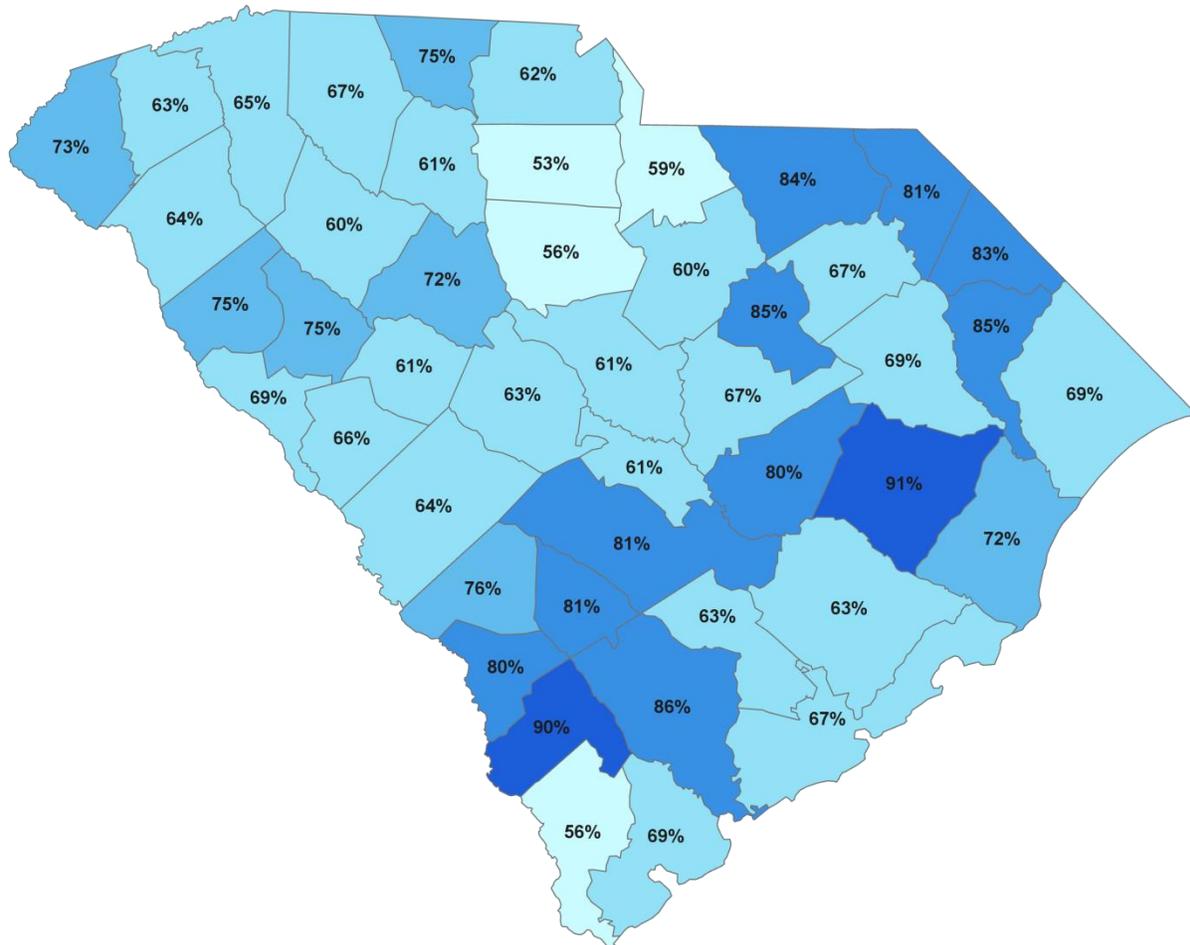


Source: HUD Comprehensive Housing Affordability Strategy (CHAS) database

The largest share of extremely low-income (ELI) households—those earning no more than 30 percent of area median income—was reported in Fairfield County (23 percent). Bamberg, Saluda, and Dillon each reported at least 20 percent of their residents as being ELI; at least 10 percent of residents fall within this category in every county statewide. Among homeowners, Calhoun (16 percent) had the highest ELI share, while 43 percent of renters in Fairfield were extremely low income. Overall, Fairfield (59 percent) had the highest share of any type of low-income households, including 84 percent of renters.

Housing and transportation costs consume most of a typical South Carolinian household's income and two-thirds of income for a household at 80 percent AMI.

**Exhibit 4: Share of Earnings Spent on Housing and Transportation
by a Moderate-Income Household by County, 2011-2015**

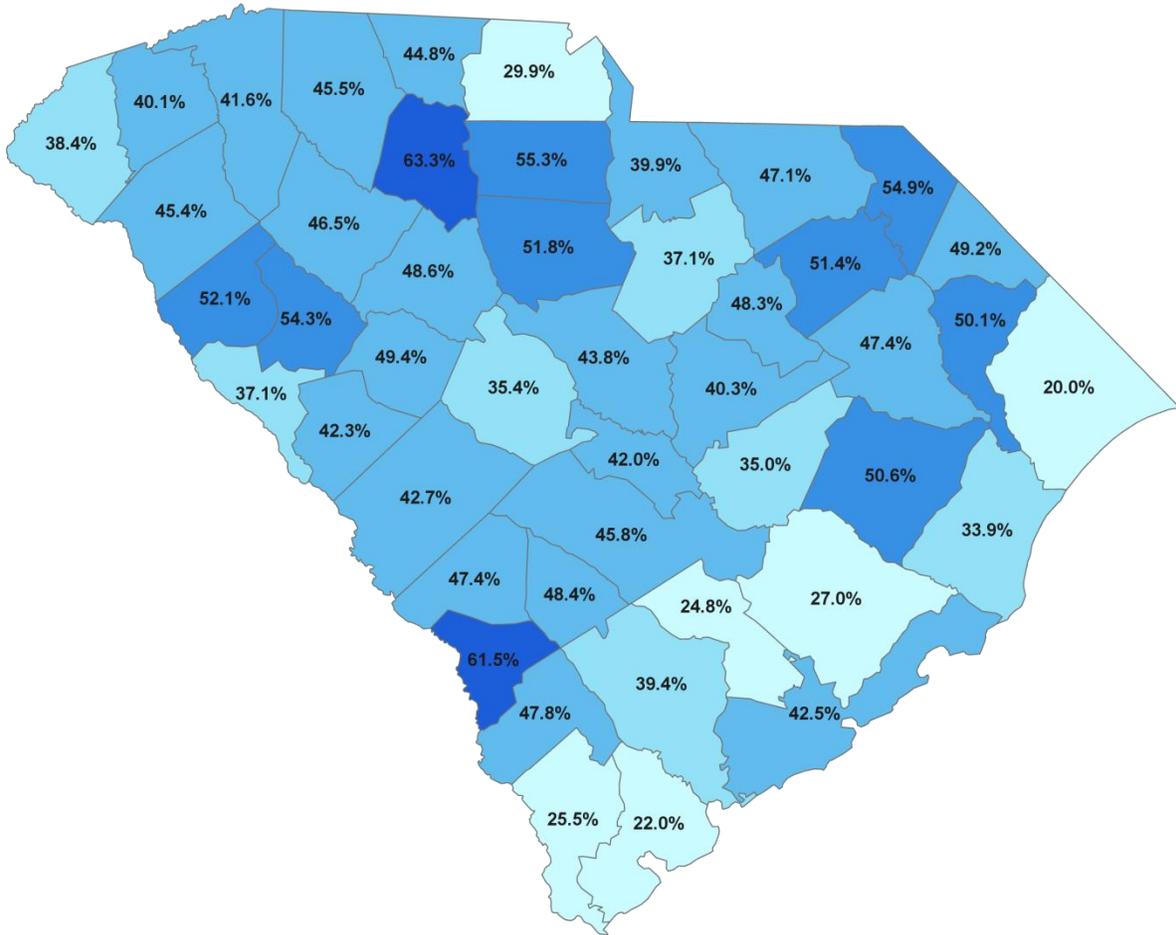


Source: Center for Neighborhood Technology

The median South Carolinian household spends 57 percent of its income on housing and transportation costs. For households with a moderate income (80 percent AMI), this figure jumps to 67 percent. These are simply state averages, however. Among the state's counties, moderate-income households in Williamsburg expend the greatest share of income on housing and transportation costs (91 percent), followed by Hampton (90 percent), while Chester had the lowest total at 53 percent.

South Carolina's housing stock is the fourth youngest in the country, but a substantial amount of housing is functionally obsolete.

Exhibit 5: Percent of Housing Units Built Before 1980, 2013-2017

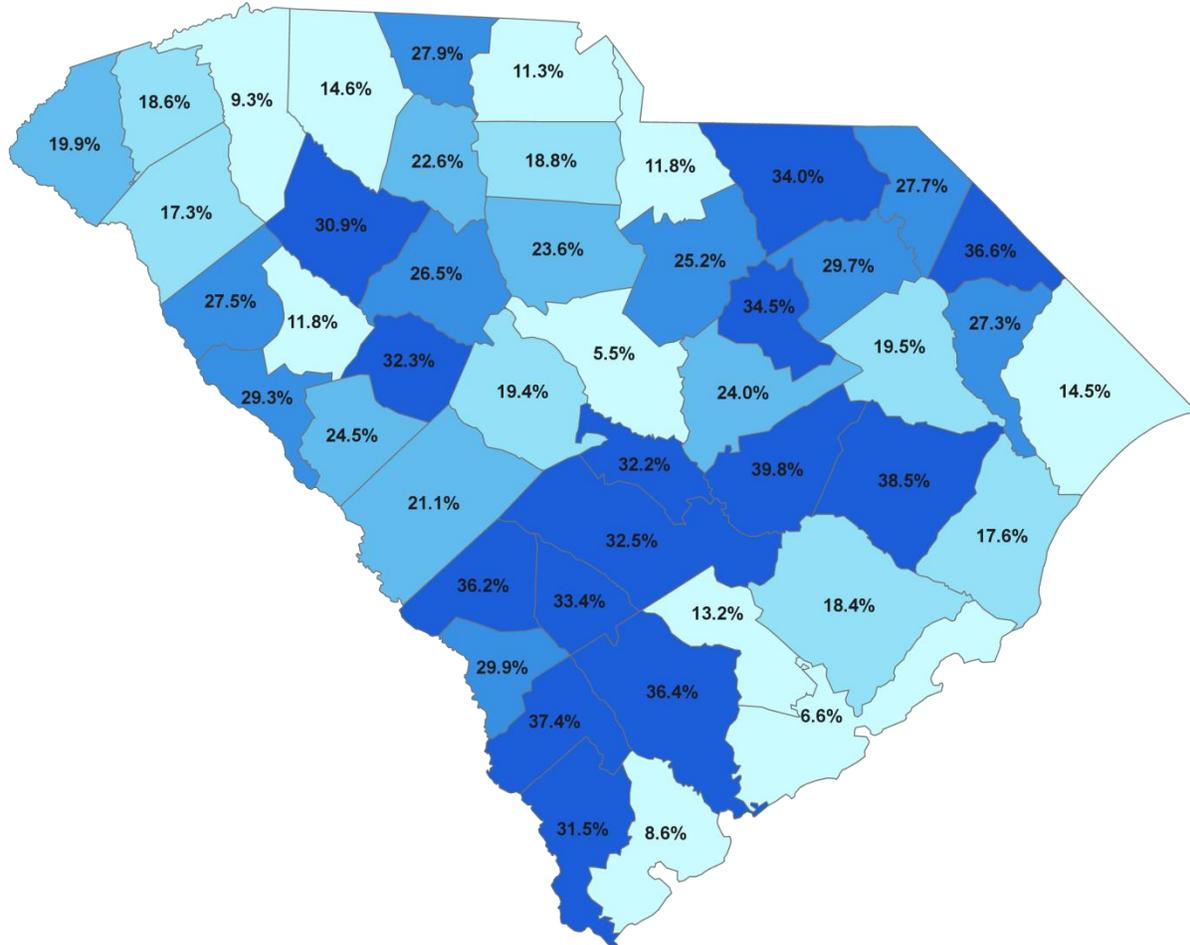


Source: U.S. Census Bureau American Community Survey (2013-2017 Five-Year Estimates)

South Carolina's housing stock is relatively new; the median year of housing construction was 1987, indicating newer housing than all but three other states (Nevada, Arizona, and Georgia). The share of units built before 1980 ranges from just 20 percent in Horry County to 63 percent in Union County. Despite this, however, the state is somewhat more likely than average to have substandard housing. One out of 30 housing units statewide lacks complete kitchen facilities, defined as having a sink, stove, and refrigerator (3.3 percent vs. 2.9 percent nationally), while one out of 38 lack complete plumbing facilities, defined as running water, a toilet, and a tub or shower (2.7 percent vs. 2.0 percent nationally). More detailed data on housing quality is, unfortunately, not comprehensively available.

South Carolina’s housing stock is also unique in that manufactured housing is quite common. Only New Mexico has a higher share of housing units that were built off-site.

Exhibit 6: Mobile Homes as a Share of Housing Units by County, 2013-2017



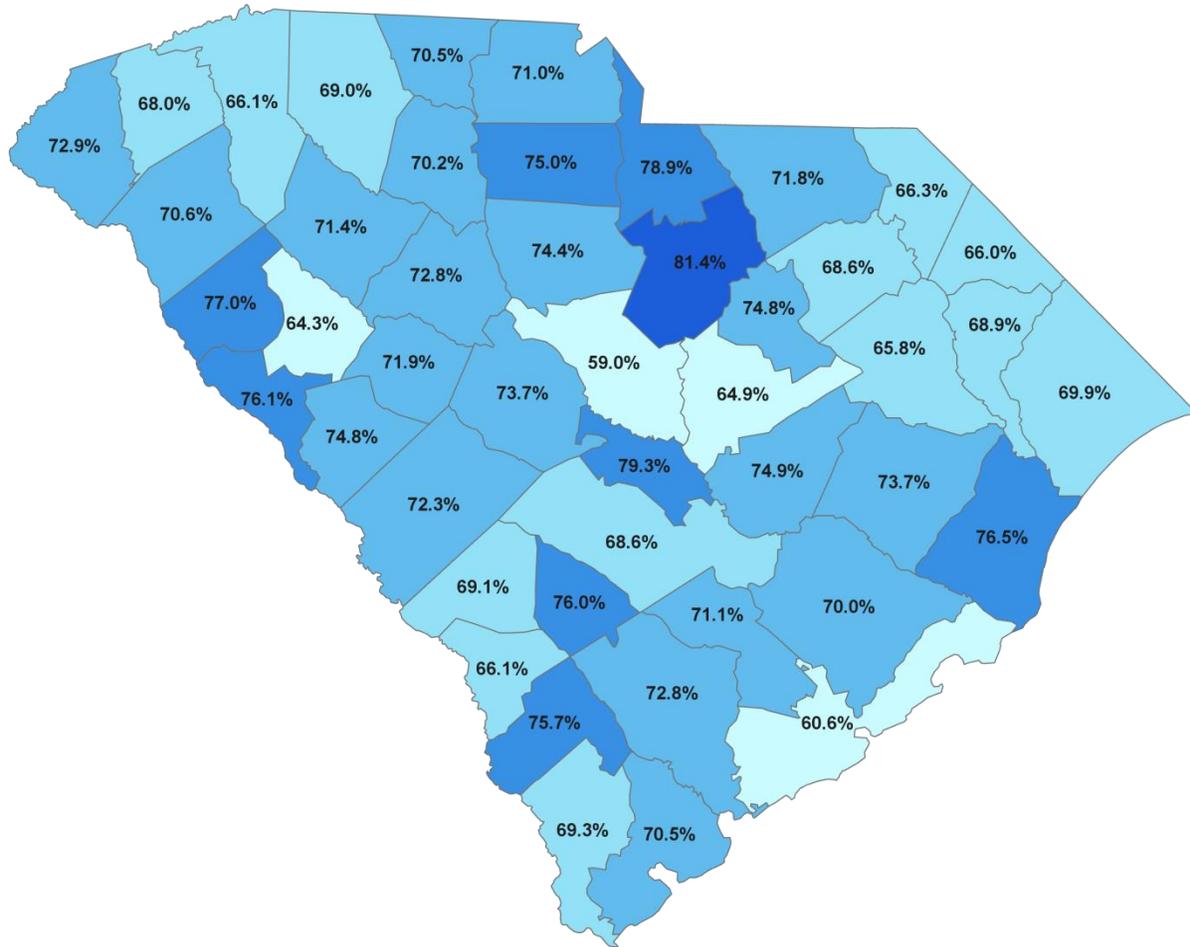
Source: U.S. Census Bureau American Community Survey (2013-2017 Five-Year Estimates)

One in six housing units (16.6 percent) in South Carolina is a mobile home², which is well above the national figure of 6.3 percent. In some rural areas, the number of manufactured homes nearly equals that of conventionally constructed single-family homes, representing 40 percent of housing units in Clarendon County and over a third in eight others. Even in wealthier and more densely populated areas, manufactured housing is often a large share of the local housing mix.

² “Mobile home” is the term used by the U.S. Census Bureau to denote any variety of manufactured housing.

South Carolina has the sixth-highest homeownership rate in the country, though this rate varies substantially across the state.

Exhibit 7: Homeownership Rate by County, 2013-2017

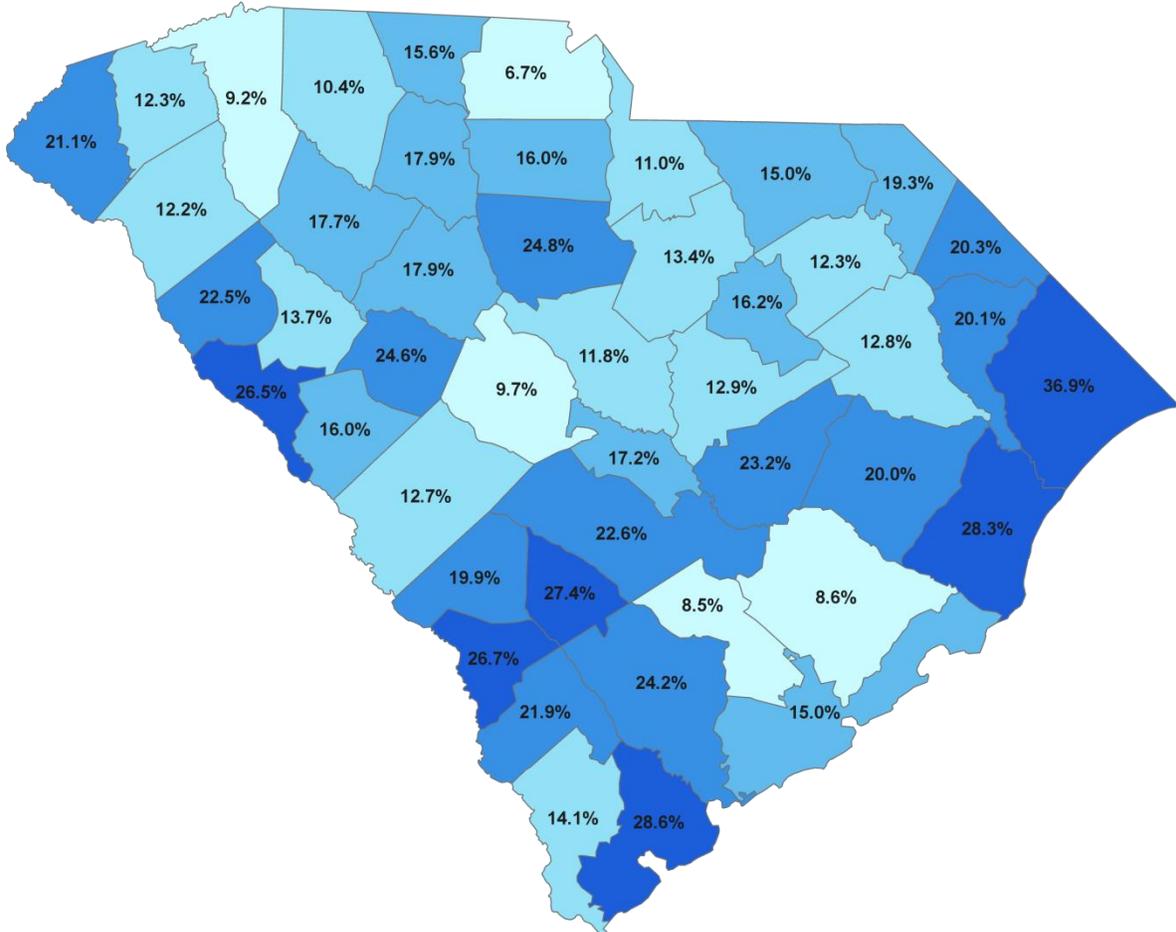


Source: U.S. Census Bureau American Community Survey (2013-2017 Five-Year Estimates)

South Carolina has had, and continues to have, an exceptionally high homeownership rate relative to other states. Housing Vacancy Survey (HVS) data indicated that, in 2018, 72.0 percent of South Carolina households owned their home, trailing only West Virginia, New Hampshire, Michigan, Mississippi, and Utah nationally and well above the national rate of 64.4 percent. This represents a substantial increase from 2015, when homeownership had dropped to 67.1 percent, the lowest figure on record. According to ACS data, the lowest rate of homeownership among counties is Richland at 59.0 percent, attributable to both increased rental tenure in urban areas as well as student and military populations that are more likely to move often. Meanwhile, Kershaw County had the highest homeownership rate statewide at 81.4 percent.

South Carolina has a much higher than average housing vacancy rate, due in part to the large quantity of seasonal housing.

Exhibit 8: Vacancy Rate by County, 2013-2017

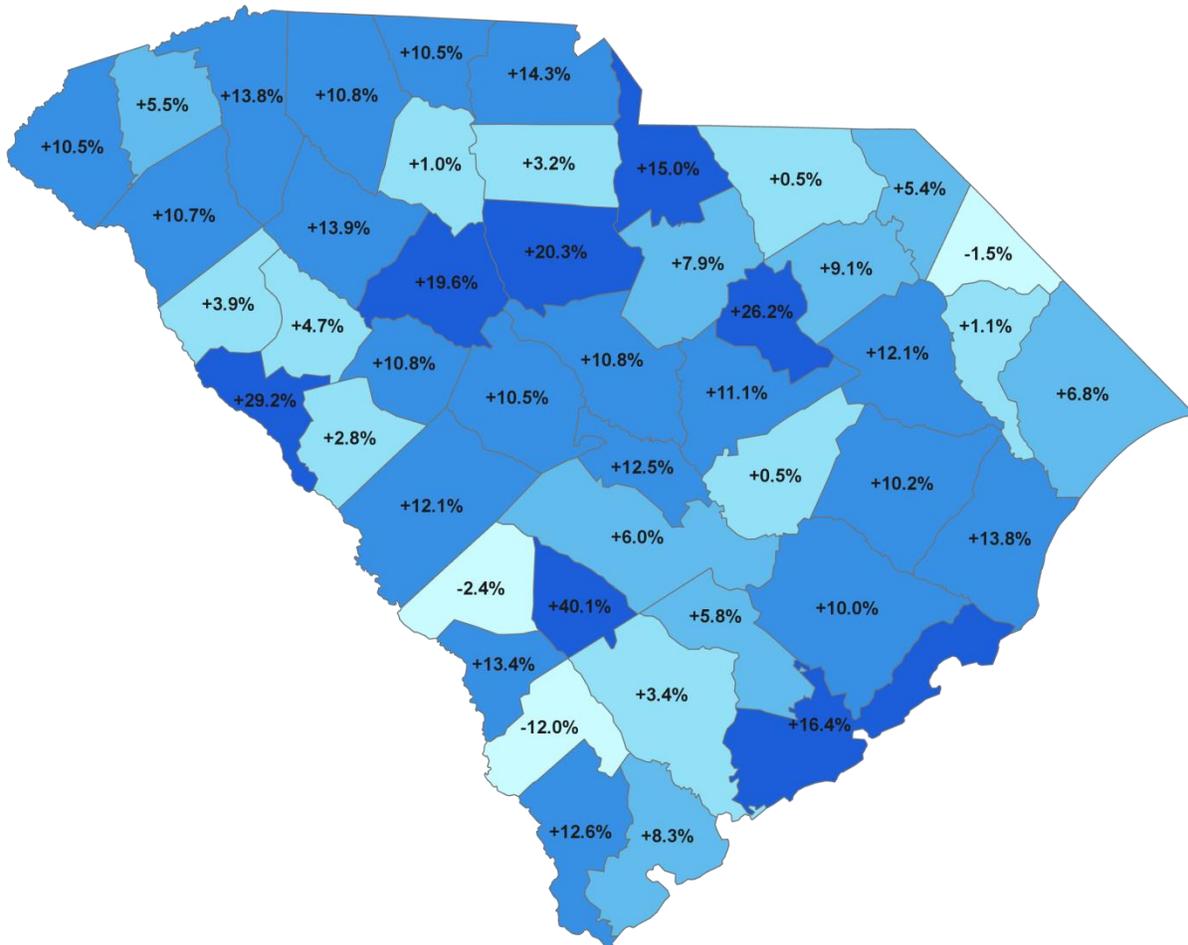


Source: U.S. Census Bureau American Community Survey (2013-2017 Five-Year Estimates)

In 2018, South Carolina had a gross vacancy rate—the share of housing units not occupied year-round—of 16.0 percent, the twelfth highest in the nation and well above the national figure of 12.3 percent and the lowest in the state since 2006. Among counties, according to 2013-2017 ACS data, vacancy rates range from a low of 6.7 percent in York County to 36.9 percent in Horry County, though most vacancies in the latter are attributable to seasonal housing. Indeed, other coastal counties report many of the highest vacancy rates for this reason; among inland counties, Bamberg has the highest vacancy rate at 27.4 percent. High vacancies in non-resort areas with population decline likely suggest distressed housing stock that is not fit for occupancy.

Median gross rent increased 12 percent over a five year period. The median renter now pays more than 30 percent of their income toward rent and utilities.

Exhibit 11: Change in Median Gross Rent by County, 2008-2012 to 2013-2017



Source: U.S. Census Bureau American Community Survey (2008-2012 and 2013-2017 Five-Year Estimates)

Contrasting the 2013-2017 figures with comparable 2008-2012 data shows an increase of 11.6 percent in median gross rent statewide. Changes ranged from a 12 percent decrease in Hampton County to a 40 percent increase in Bamberg County. Three counties saw housing costs decline, while most (26 of 46) saw a double-digit increase. Relative to income, the median renter household paid 30.3 percent of its income toward gross rent, narrowly above the widely recommended 30 percent benchmark; this figure ranges from a low of 25 percent in Hampton County to a high of 41 percent in Fairfield County.

Sixty-three percent of housing units in South Carolina are single-family detached homes, while only 13 percent are situated in multifamily housing.

Exhibit 12: Profile of South Carolina Housing Stock, 2013-2017

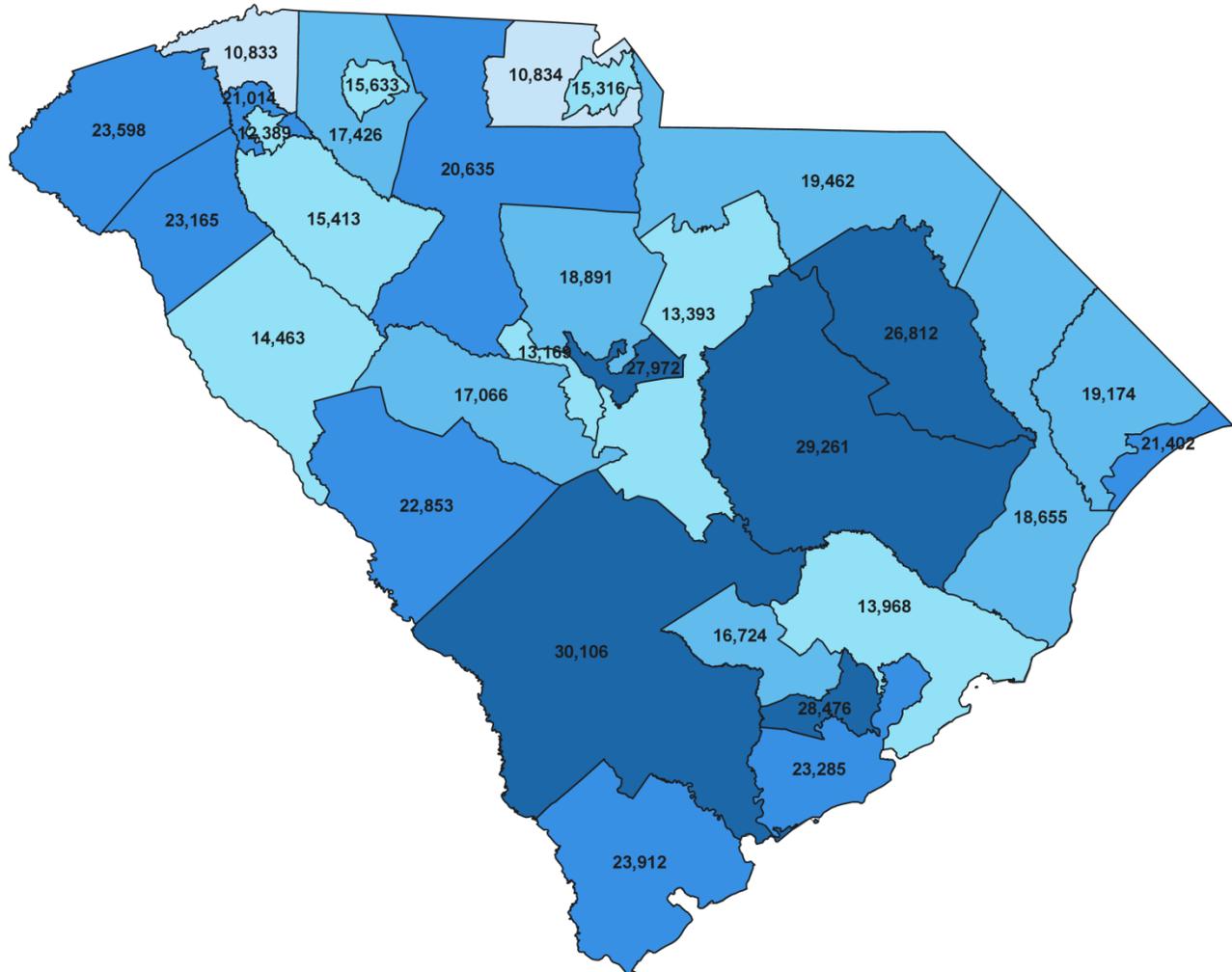
Type of building	Owner Households		Renter Households		Vacant Units		All Units		Homeownership Rate	Vacancy Rate
	Count	%	Count	%	Count	%	Count	%		
1-unit detached	1,023,118	79.6%	199,408	34.0%	174,789	48.8%	1,397,315	62.7%	83.7%	12.5%
1-unit attached	34,594	2.7%	23,104	3.9%	9,776	2.7%	67,474	3.0%	60.0%	14.5%
2 units	2,860	0.2%	35,354	6.0%	8,857	2.5%	47,071	2.1%	7.5%	18.8%
3 or 4 units	5,374	0.4%	45,793	7.8%	12,233	3.4%	63,400	2.8%	10.5%	19.3%
5 to 9 units	7,606	0.6%	70,864	12.1%	19,786	5.5%	98,256	4.4%	9.7%	20.1%
10 to 19 units	4,317	0.3%	54,558	9.3%	19,902	5.6%	78,777	3.5%	7.3%	25.3%
20 to 49 units	3,378	0.3%	32,341	5.5%	19,100	5.3%	54,819	2.5%	9.5%	34.8%
50 or more units	2,602	0.2%	23,546	4.0%	24,638	6.9%	50,786	2.3%	10.0%	48.5%
Mobile home	199,869	15.6%	101,110	17.2%	68,936	19.3%	369,915	16.6%	66.4%	18.6%
Boat, RV, etc.	814	0.1%	697	0.1%	0	0.0%	1,511	0.1%	53.9%	0.0%
All housing units	1,284,532	100%	586,775	100%	358,017	100%	2,229,324	100%	68.6%	16.1%

Source: U.S. Census Bureau American Community Survey (2013-2017 Five-Year Estimates)

Overall, 63 percent of housing units statewide are single-family detached properties, of which 84 percent are owned by the occupant, the 2013-2017 American Community Survey (ACS) reported. These homes also represent 34 percent of all rentals, however. On the other end of the spectrum, 13 percent of housing units are located in multifamily properties (defined by HUD as containing five or more units). A staggering 30 percent of units in multifamily properties are categorized as vacant. It is important to note, however, that these units are most likely to be seasonal properties in coastal communities rather than abandoned housing units.

Additional Shelter Poverty Data

Exhibit 13: Households Experiencing Shelter Poverty by Public Use Microdata Area (PUMA), 2013-2017



As noted in the main report, there were a total of 585,300 households in South Carolina, or 1,382,107 individuals, experiencing shelter poverty. It is worth emphasizing that this is a statewide issue. Each PUMA has at least 10,000 households unable to meet their most basic needs due to housing costs, with the smallest numbers situated in northern Greenville County and western York County, respectively. Over 30,000 households experienced shelter poverty in a six-county region that includes Allendale, Bamberg, Barnwell, Colleton, Hampton, and Orangeburg. The PUMAs with the highest numbers of distressed households were found in urban, suburban, and rural areas alike.

Exhibit 14: Aggregate Annual Depth of Household Shelter Poverty by PUMA (in millions), 2013-2017

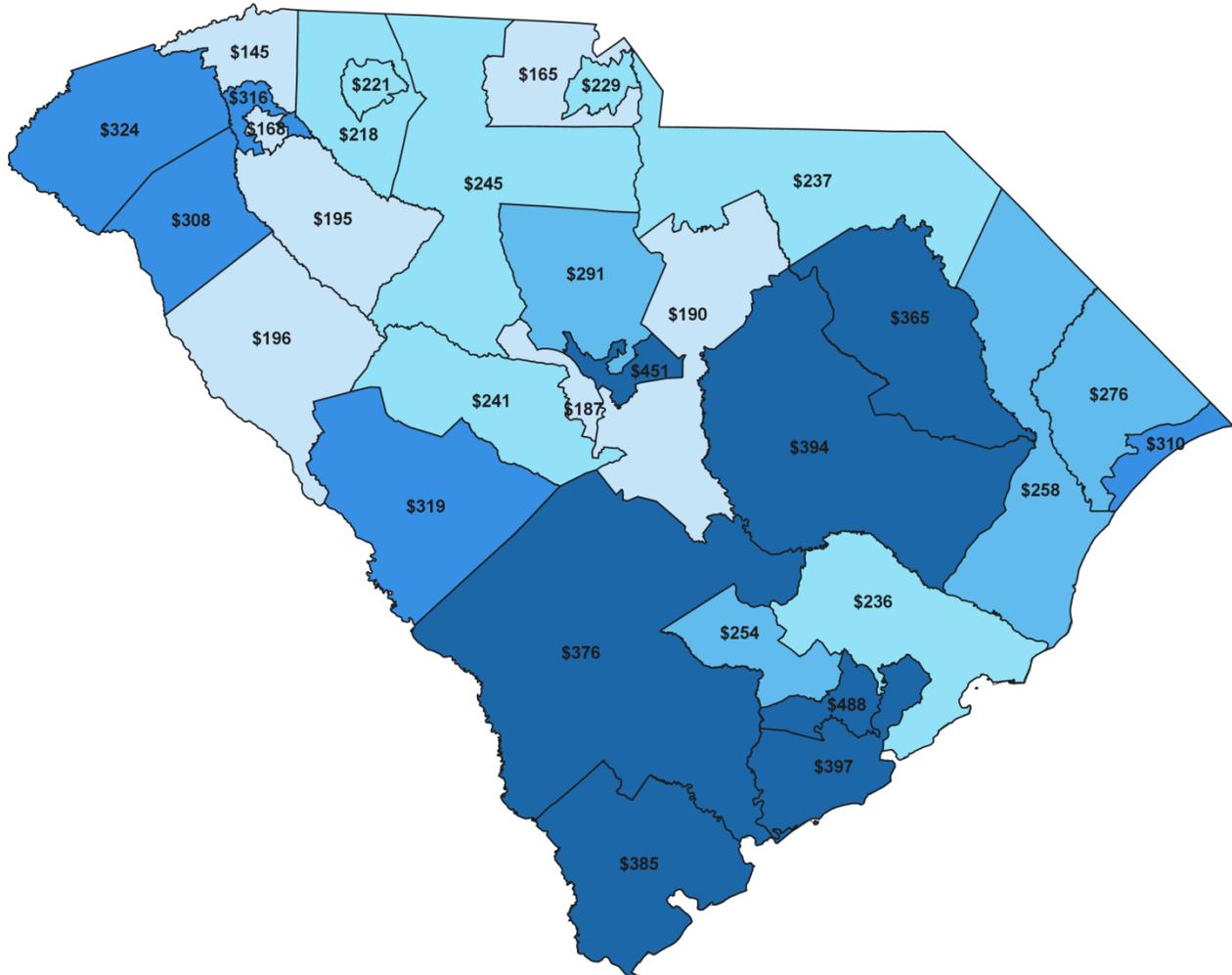
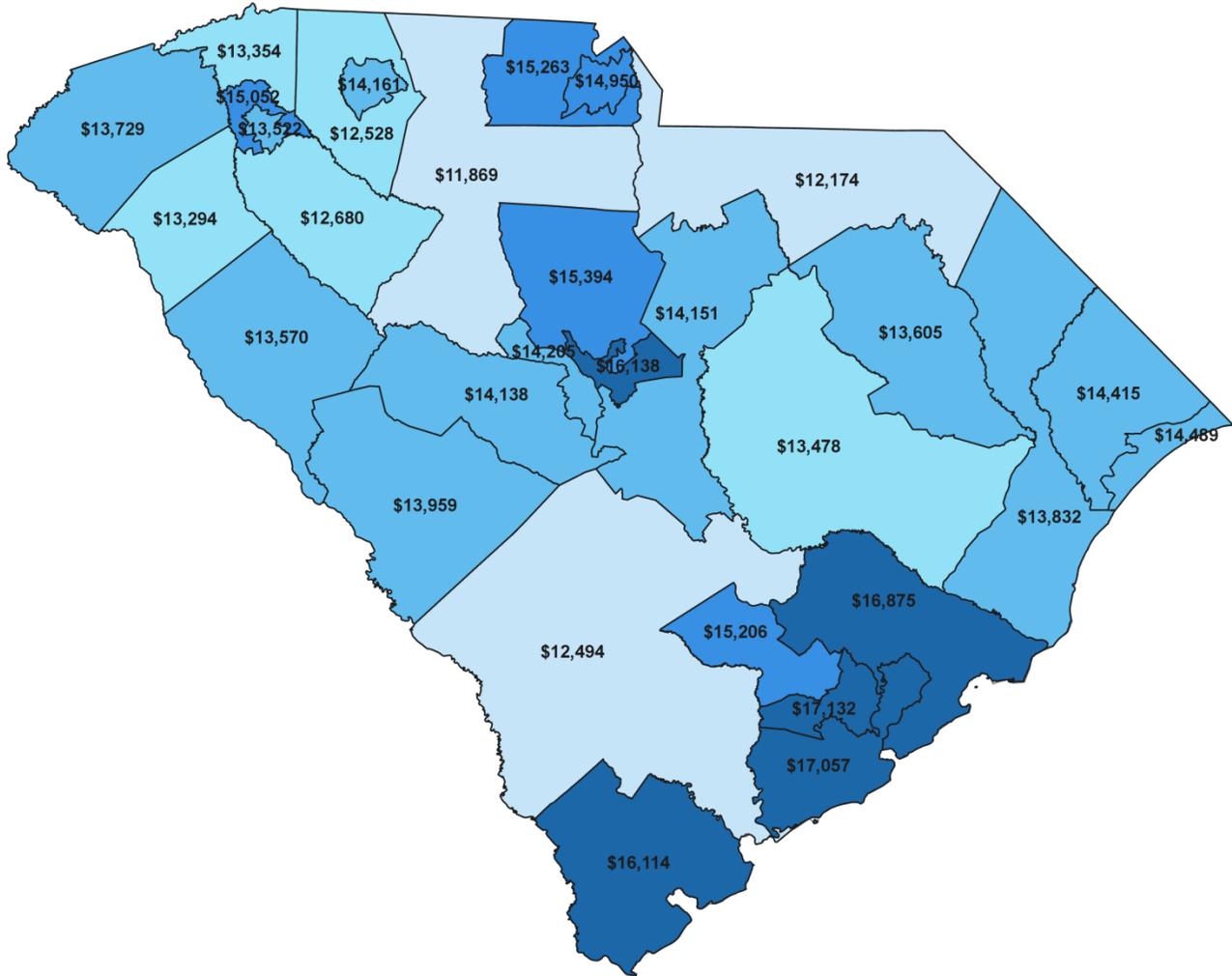


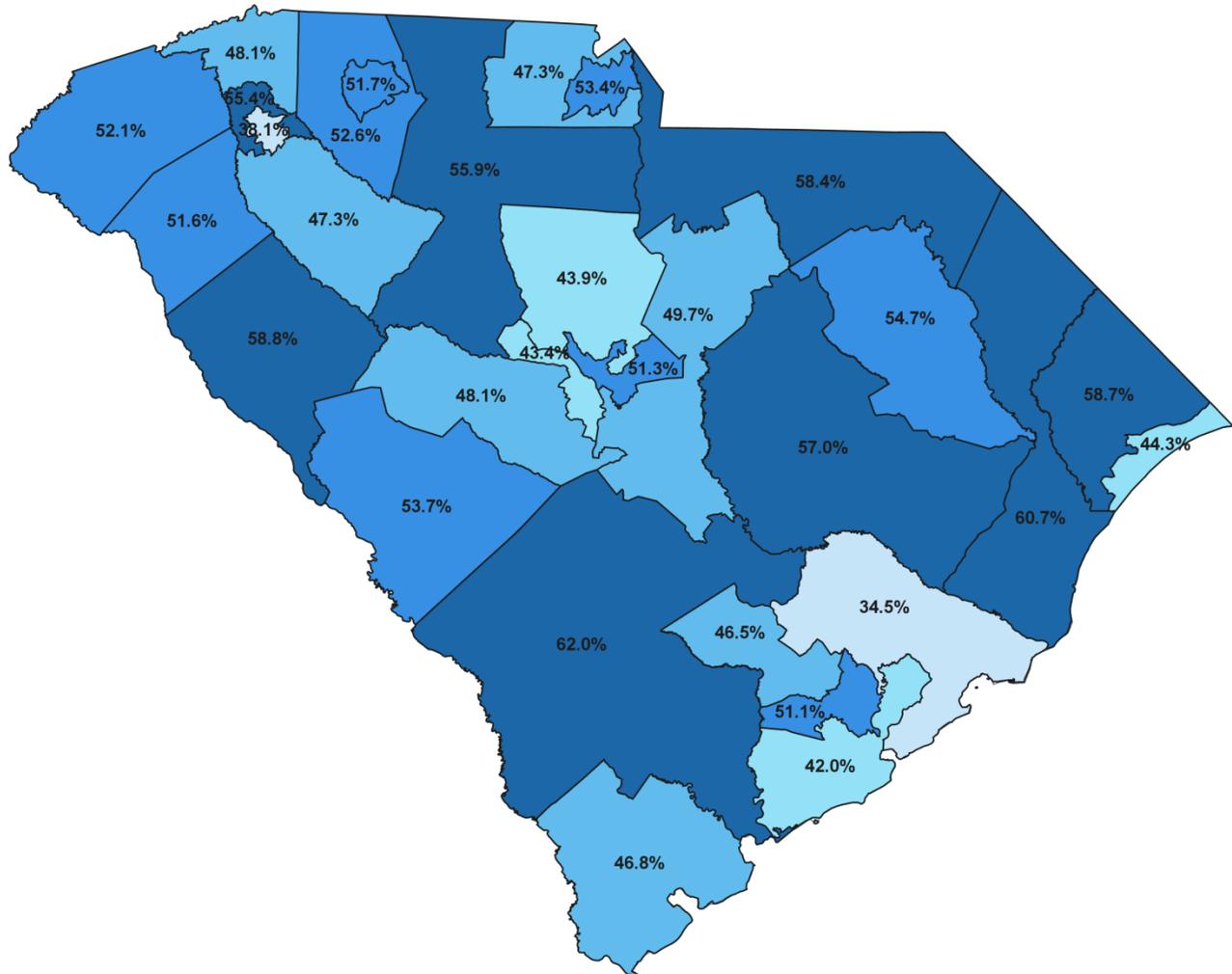
Exhibit 14 shows the geographic distribution of the overall \$8.4 billion shortfall in economic activity due to shelter poverty. Again, while the scale of the problem may be somewhat greater in some portions of South Carolina than others, this is a statewide challenge. The two areas with the highest aggregate gap were in the regions including the cities of North Charleston (\$488 million) and Columbia (\$451 million).

Exhibit 15: Average Annual Depth of Household Shelter Poverty by PUMA, 2013-2017



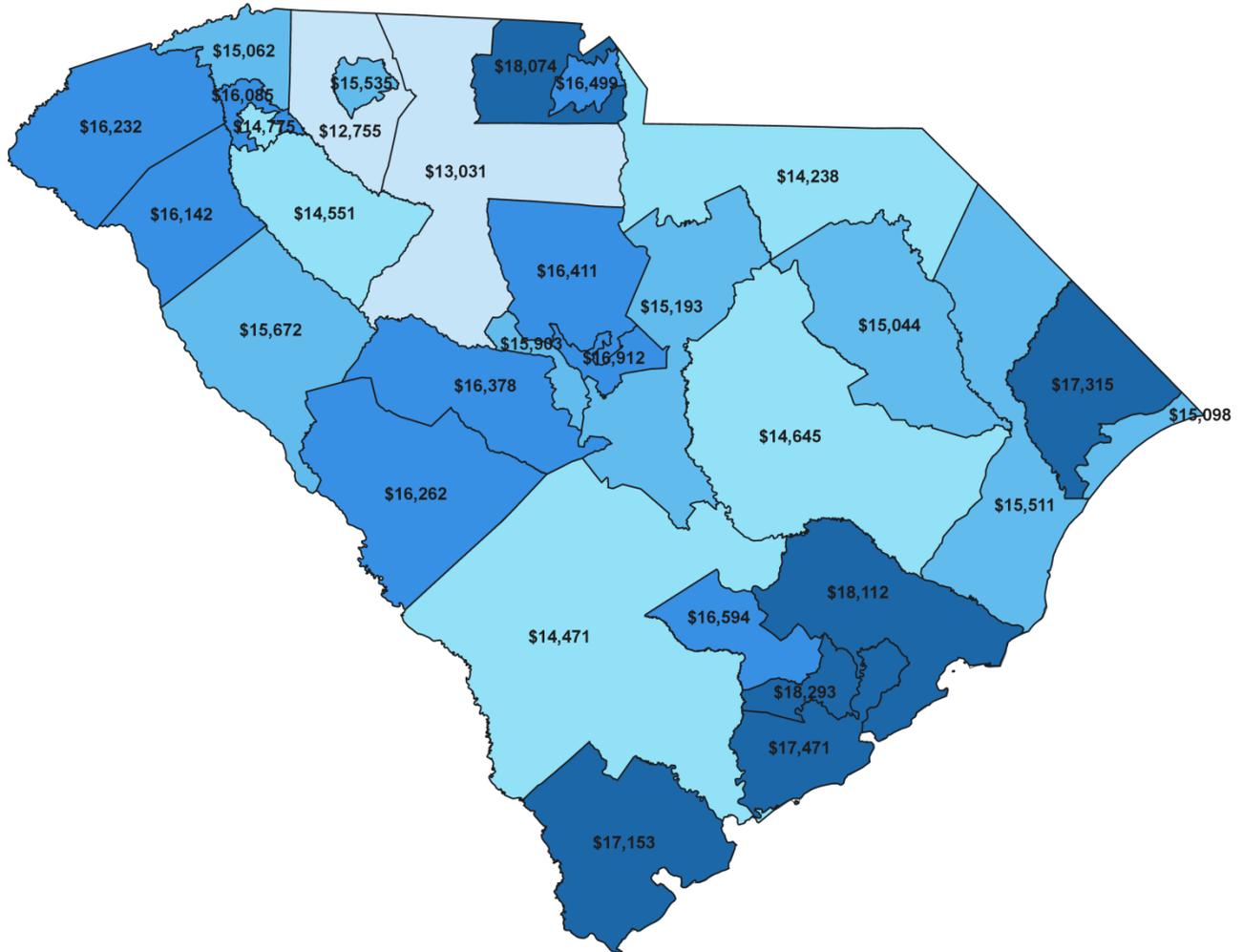
Meanwhile, the geography of the shortfalls experienced by shelter poor households is quite different. The average annual depth of shelter poverty per economically distressed household ranged from \$11,869 in a region that covers Cherokee, Chester, Newberry, and Union Counties, to \$17,132 near Charleston. Indeed, the three highest figures are all located in the Charleston region. Such densely populated areas tended to have income gaps above the state average of \$14,330 while those in more rural areas tended to be lower, though those areas often have lower wages as well.

Exhibit 16: Percent of Renter Households Experiencing Shelter Poverty by PUMA, 2013-2017



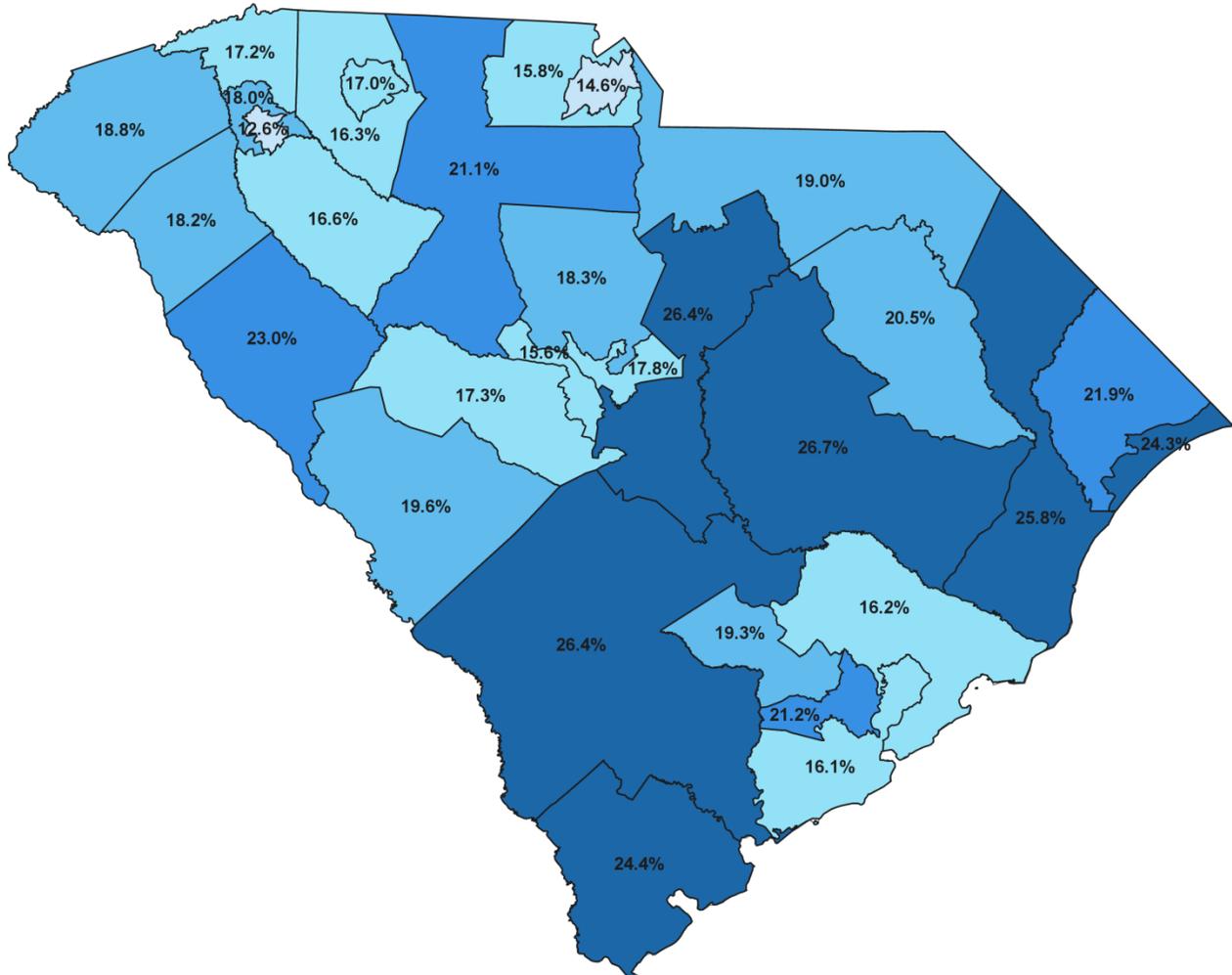
Focusing exclusively on renters, it is clear that the rates of shelter poverty are dramatically higher for this population than the state as a whole, given their lower incomes. Just over half (50.5 percent) of renter households in South Carolina experienced shelter poverty. By PUMA, these rates ranged widely, from 34.5 percent in the Mount Pleasant area to 62.0 percent in the state's rural southwest. As with the state overall, renters in rural areas were generally more likely to experience shelter poverty.

Exhibit 17: Average Annual Depth of Renter Shelter Poverty by PUMA, 2013-2017



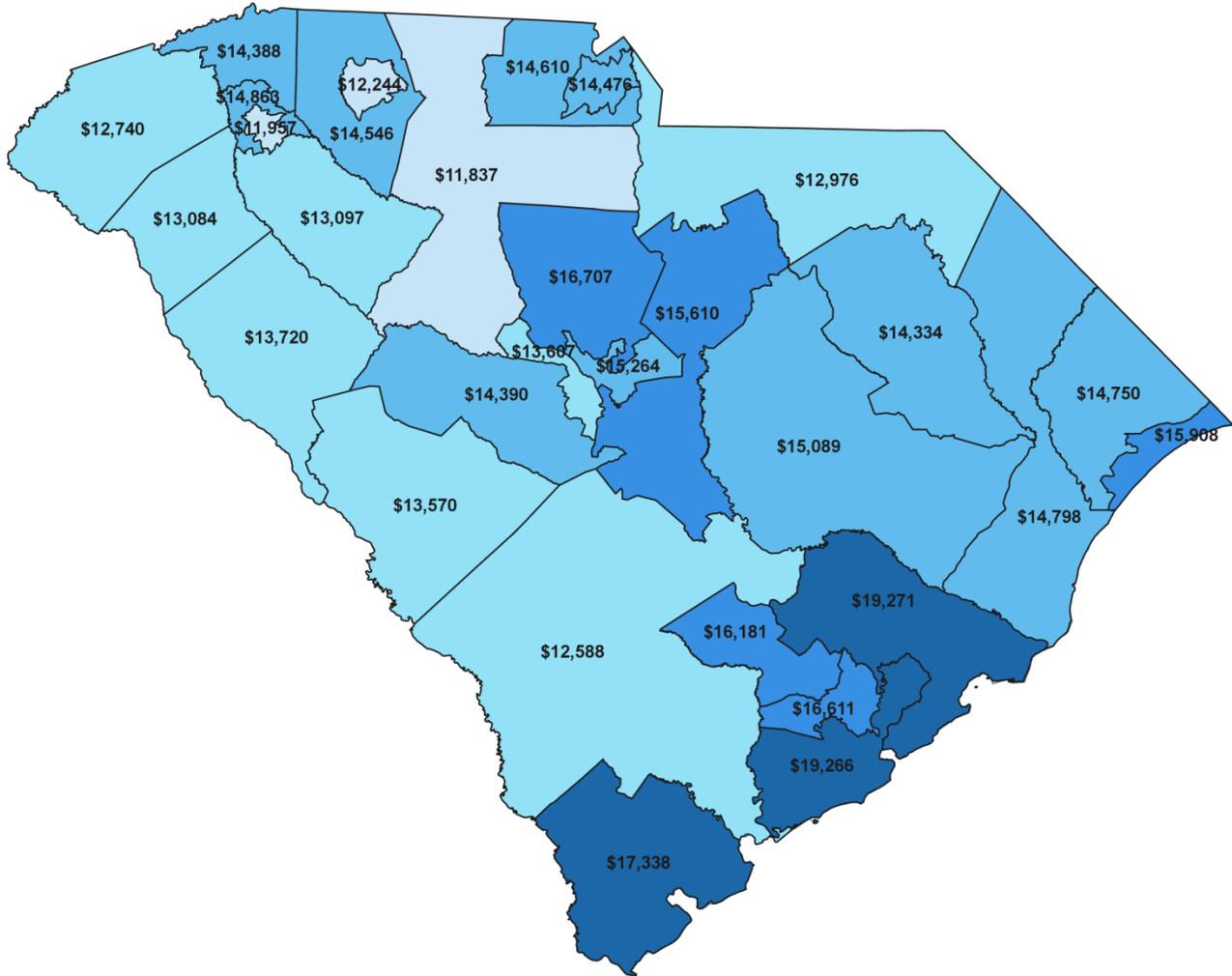
The average South Carolina renter household experiencing shelter poverty had an affordability gap of \$15,922 per year. Again, this varied somewhat by region, ranging from \$12,755 in outer Spartanburg County to \$18,293 in the northern suburbs of Charleston. As shown above, these figures were generally highest in the densest, most rapidly growing parts of the state. Relative to the overall population (Exhibit 6), renters have larger affordability gaps in all 30 PUMAs; this differential ranges between \$227 and \$2,900 per household, with the highest figure coming from inland Horry County.

Exhibit 18: Percent of Mortgagor Households Experiencing Shelter Poverty by PUMA, 2013-2017



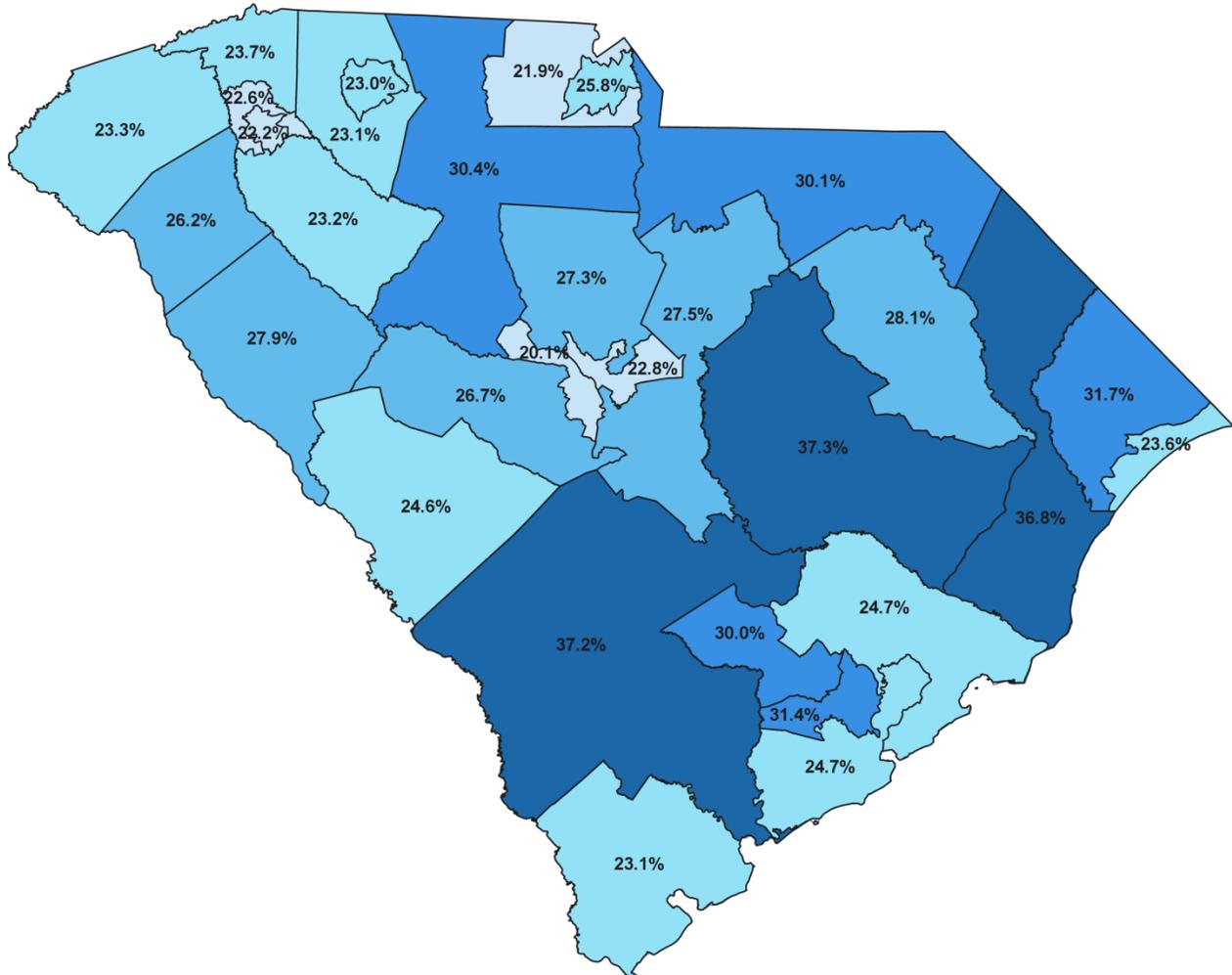
Among homeowners with a mortgage, nearly one in five (19.3 percent) experienced shelter poverty. Unlike renter households, where rates were universally highest in rural areas statewide, mortgage holders also experience above average rates of shelter poverty in developed coastal areas outside of the Charleston metro area. Overall, the lowest rate was in urban areas of Greenville County (12.6 percent), while the highest was in Clarendon, Lee, Sumter, and Williamsburg Counties (26.7 percent). Even among a population that is, on average, doing far better than the state at large, this represents a substantial share of South Carolina households.

Exhibit 19: Average Annual Depth of Mortgagor Shelter Poverty by PUMA, 2013-2017



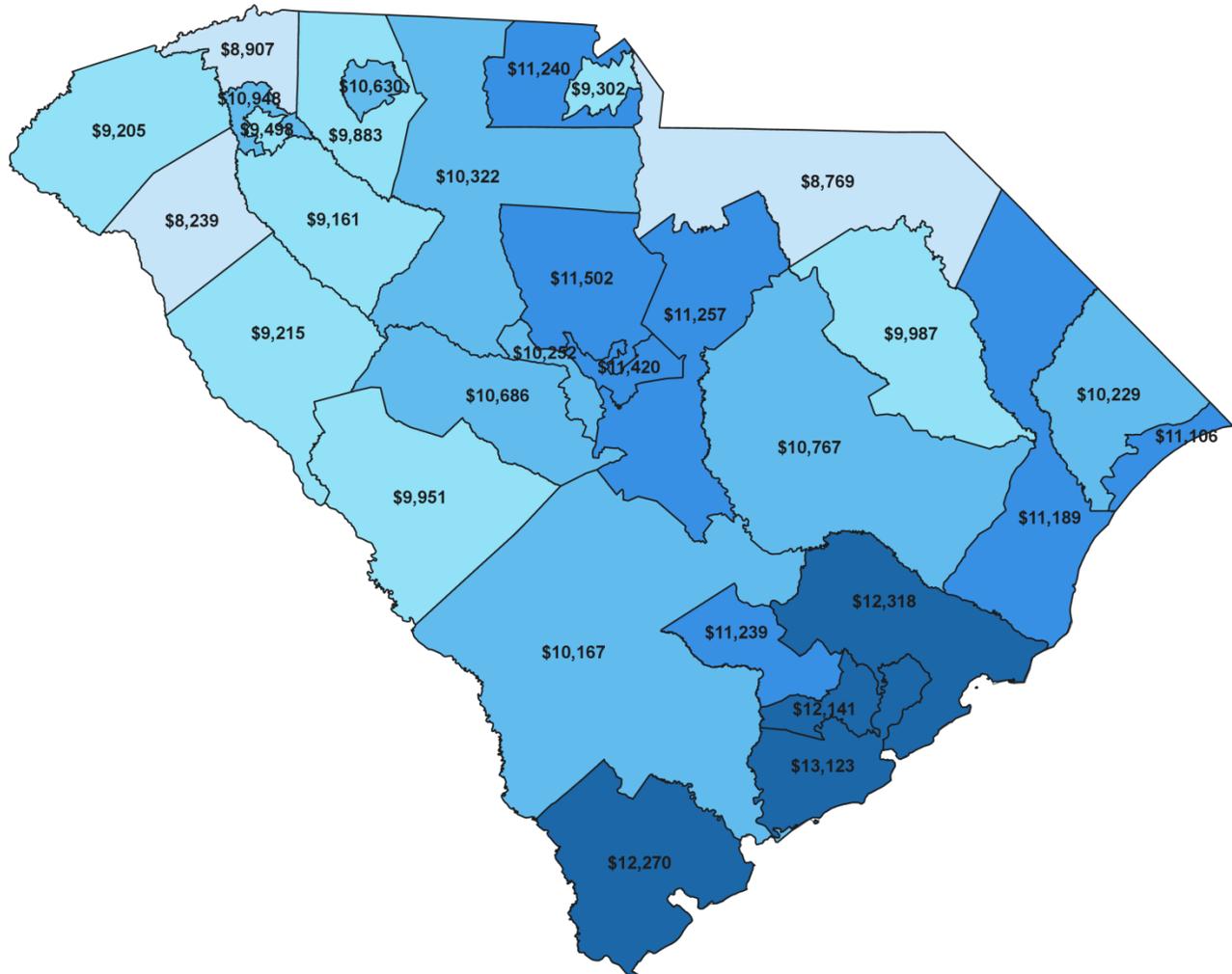
Shelter poverty among homeowners with a mortgage is clearly deepest in the Lowcountry. The average economically distressed household had a shortfall of over \$19,000 in substantial portions of Berkeley and Charleston Counties, with the rest of the region also well above the statewide figure of \$14,911. Mortgagors in Fairfield and northern Richland Counties were also heavily burdened (\$16,707). Meanwhile, the lowest figure (\$11,837) was seen in Cherokee, Chester, Newberry, and Union Counties. It is worth noting that even this minimum figure indicates that homeowners with mortgages experiencing shelter poverty are nearly \$1,000 short per month in meeting basic household needs.

Exhibit 20: Percent of Free and Clear Homeowners Experiencing Shelter Poverty by PUMA, 2013-2017



In every corner of South Carolina, at least one in five homeowners that did not have a monthly mortgage payment still experienced shelter poverty. The lowest rate, 20.1 percent, was in a swathe of northern and eastern Lexington County. Meanwhile, the most distressed areas, by far, were the same three PUMAs identified in the main report, covering most rural areas in southern and eastern portions of the state. In each of these regions, about 37 percent of homeowners without a mortgage experienced shelter poverty, while no other area was above 32 percent.

Exhibit 21: Average Annual Depth of Free and Clear Homeowner Shelter Poverty by PUMA, 2013-2017



The average homeowner without a mortgage experiencing shelter poverty had an affordability gap of \$10,451 per year, or \$200 per week. The lowest figure in the state was \$8,239 in Anderson County, while the highest (\$13,123) was in the region that includes the City of Charleston. Overall, as with homebuyers with a mortgage, the highest figures of free and clear homeowners experiencing shelter poverty are concentrated in the Lowcountry.

Shelter Poverty Methodology

Note: This description is excerpted and adapted from the author's forthcoming article, "Shelter Poverty in Ohio: An Alternative Analysis of Rental Housing Affordability," which described prior work done while employed by the Ohio Housing Finance Agency. This article has been peer-reviewed and accepted for academic publication in Housing Policy Debate. The same methodological approach was used in the computations done for the South Carolina Housing Needs Assessment.

Housing affordability is a multifaceted issue that encompasses not only housing costs, but also household income, family size and characteristics, and the availability of housing, among others. As a result, measuring housing affordability has been fraught since at least the 1930s (von Hoffman, 2012); there is a long-standing debate regarding how this idea should be conceptualized and operationalized (Pelletiere, 2008).

The most commonly used measure of housing affordability is a ratio approach. One's housing is considered unaffordable if housing and utility costs exceed a certain percentage of gross household income (M. Schwartz & Wilson, 2008). In the United States, this ratio is often set at 30 percent, with several federal housing programs using this standard either directly or indirectly in setting maximum rents (A. Schwartz, 2015).

Notably, however, this cap was originally set at 25 percent in 1969 by the Brooke Amendment to the Housing Act of 1937, before being raised to its current level by the Omnibus Budget Reconciliation Act of 1981 (McCarty, 2014; M. Schwartz & Wilson, 2008). In 2018, Secretary of Housing and Urban Development Ben Carson proposed increasing this level to 35 percent for many households (Jan, Dewey, & Stein, 2018). In short, the 30 percent threshold is, at least to a degree, a product of political wrangling rather than rigorous analysis.

There is a great deal of support for this methodology due to its simplicity and ease of application across time periods and geographies (Pelletiere, 2008). Recent reports quantifying housing unaffordability have employed the 30 percent threshold to highlight the breadth and depth of distress across the nation as a whole and within subpopulations like extremely low-income households and racial minorities (Bolton, Bravve, Miller, Crowley, & Errico, 2015; Watson, Steffen, Martin, & Vandenbroucke, 2017; Joint Center for Housing Studies of Harvard University, 2018).

Other versions of the ratio approach have been developed. Feins and Lane (1981) used household budget data from the U.S. Bureau of Labor Statistics (BLS) to demonstrate that housing consumption as a percentage of income varies widely based on characteristics such as age, size, income, and geography. The authors proposed setting the ratio threshold at the percent of income that BLS' "lower budget," which estimated the minimum amount of money to cover all essential household expenditures, for the relevant household. Based on 1977 data, the ratio would be, for example, 19% for a family of four in an urban area or 36% for a retired couple, changing as housing's share of essential household expenditures vary. This approach accounts for the fact that raising children, among other household circumstances, imposes additional expenditures that ought to be built into a measure of housing affordability.

However, all ratio approaches, even with such adjustments, assume that households earning less income also require proportionately lower levels of expenses for non-housing needs; while this may be true for households at higher levels of consumption, this is not true at the other end of the spectrum (O'Dell, Smith, & White, 2004; Stone, 2006). There is a fixed level of household spending that

is simply necessary for survival and functioning as a healthy member of society. Many low-income households may be left with no money for housing expenses after accounting for these other necessities. This highlights the insufficiency of this ratio approach for giving a more nuanced view of true housing burden.

An alternative is the residual income approach. A household has a housing affordability problem if it cannot meet its basic non-housing needs after it pays for housing; no matter how little a household earns, basic needs like food require a minimum level of spending for the health and continued productivity of its members. Households that are pressed between income and housing cost so that they cannot meet their non-housing needs are said to be experiencing shelter poverty (Stone, 1975). By recognizing non-housing consumption, shelter poverty attempts to add more nuance to fully identify households with affordability problems.

Stone (1975) was instrumental in proliferation and early consideration of shelter poverty, which used the same BLS expenditure surveys as Feins and Lane (1981) to estimate essential non-housing expenditures. BLS' lower budget, however, has not been produced since 1981. Stone (2006) accounted for this by adjusting for inflation in the intervening years, but this assumes that extrapolating from a fixed 1981 consumption bundle is reflective of household expenditures decades later.

Kutty (2005) modified Stone's (1990) original operationalization of shelter poverty, using the federal poverty level (FPL) as the underlying basis for computing budgets. Kutty (2005) simplified the process by setting essential non-housing spending at two-thirds of FPL; thus, a household for whom housing expenses plus essential non-housing spending exceeds their total income is said to be in a state of "housing-induced poverty."

While this avoided Stone's extrapolation process, Kutty (2005) conceded that the federal poverty measure suffers from similar critique, as it has not fundamentally changed since 1969—aside from Consumer Price Index-based cost-of-living increases. Using the widely referenced poverty level rather than a defunct BLS report makes the measure more easily understood. The problem with Kutty's (2005) approach is that it lacks a compelling alternative budget baseline, using two-thirds of FPL as a stopgap in lieu of more detailed work like the 1981 BLS budget.

Kutty (2005) is one of few to pursue Stone's idea of shelter poverty. While it has been used in international contexts (e.g., Yang & Shen, 2008; Stephens & van Steen, 2011) and cited as an alternative to the ratio measure in key works (e.g., Belsky, Goodman, & Drew, 2005; Pelletiere, 2008), it has largely been addressed in the abstract. The literature applying this method to the question of rental affordability in the United States is virtually nonexistent, with nearly all such analyses content to use the ratio approach.

A notable recent exception to this is Herbert, Hermann, & McCue (2017), which assessed three metropolitan areas—Cleveland, Phoenix, and Los Angeles—using 2015 data. The authors find that lower-income households have higher rates of shelter poverty than cost burden, but state that "burden levels from the more precise measures ... produced by the residual income approach are not significantly different than those generated by the cruder 30 percent of income metric." This analysis, however, only evaluated housing affordability at the metropolitan scale, rather than in more refined geographies, and only addressed the depth of shelter poverty in general terms for just one of the regions in question.

This work leans heavily on the ability to generate a representative sample of households from the American Community Survey (ACS). Seven data points are needed to calculate shelter poverty, of which six come from survey responses: (1) gross rent (i.e., including utilities) or selected owner costs, (2) household income, (3) the number of people in the household, (4) the ages of those household members, (5) the location of the home, and (6) the weight assigned to that household (i.e., the count of households that survey respondent represents in the overall population). The seventh is the level of non-housing expenditures that is necessary to sustain the household, which is provided by Pearce (2016b) and is contingent upon data points (3), (4), and (5). Age is necessary to assign a child to one of four groups (infant, preschool-age, school-age, and teenager) that dictate the level of essential expenditures needed to support the healthy development of the child, as well as whether and what level of childcare is required.

The complete file of 2013-2017 ACS microdata responses for South Carolina was obtained from the IPUMS-USA database (Ruggles, Genadek, Goeken, Grover, & Sobek, 2019), which in its turn is based on Public Use Microdata Survey files generated by the U.S. Census Bureau. The data contained 240,432 individuals residing in 111,167 households, representing a five-percent sample of the state population. Household composition was processed to facilitate assignment of households to a combination for which Self-Sufficiency Standard data were available. This was possible for 97,563 households, or 87.8 percent of households in the sample, which corresponded to one of the 152 configurations for which estimates were computed. Nearly all of the exclusions were for households where tenure (i.e., renter, owner with a mortgage, or owner without a mortgage) could not be determined from the data. These households represent the population to be analyzed in this paper.

The geographic scale is the Public Use Microdata Area (PUMA), of which there are 30 in South Carolina; this represents the smallest geography for which household-level data are available. To calculate shelter poverty, Self-Sufficiency Standard data—which are computed at the county level—were transformed to be used at the PUMA level. This was done using a crosswalk (Missouri Census Data Center, 2014) that employs weighted averages based on population counts to impute PUMA-level data. The number of households sampled by PUMA ranged from 1,977 to 4,675, with a median of 3,313. To extrapolate from the IPUMS-USA sample to the general population, supplied household weights were used. The Census Bureau assigns each household a value that reflects how many households it is representative of in the broader population, based on its characteristics. Applying these weights yields a total of 1,858,327 households reflected in the data, ranging from 40,150 to 84,268 per PUMA, with a median of 61,755. Unless otherwise noted, figures throughout this report will be based on weighted values.

While at its most basic, this analysis simply merges two data sets together, it is necessary to highlight the work done to generate the estimates produced by Pearce (2016b). The Self-Sufficiency Standard seeks to produce budgets like those developed by BLS, as described in the literature review, using current information. As the name implies, the Self-Sufficiency Standard is designed to compute the minimum amount of income needed for a household to not require need-based government assistance or other aid while availing itself of applicable tax credits. Pearce (2016b) computes budgets by county that identify minimum required spending for housing, childcare, food, transport, health care, taxes, and other expenses.

Pearce (2016a) details how outside sources, mostly federal or state government publications, are used to quantify essential expenditures. For example, for food, the U.S. Department of Agriculture's Low-Cost Food Plan is used as the baseline, supplemented with expense data generated by Feeding America; estimates of childcare costs are drawn from a report commissioned by the South Carolina

Department of Social Services. There are several simplifying assumptions Pearce (2016a) uses to generate Self-Sufficiency Standard estimates, which are highlighted in the methodology; for one, transportation costs are based on a statewide average commute distance, rather than more localized data from a source such as the Longitudinal Employer-Household Dynamics database.

The actual generation of whether, and how much, a household is experiencing shelter poverty is a matter of simple arithmetic. Household-level shelter poverty is calculated by subtracting annual non-housing expenditures, as assessed by the Self-Sufficiency Standard for the appropriate geography and household size and composition from annual income. If the resulting dollar amount is less than 12 times monthly gross rent, the household is experiencing shelter poverty; the difference is a household's depth of shelter poverty—its affordability gap, expressed in dollars per year. In short, a household's affordability gap using this method (AG_{sp}) is computed thusly, with a household experiencing shelter poverty if AG_{sp} is greater than zero:

$$AG_{sp} = \max(12 \times \text{monthly gross rent OR selected monthly owner costs} + \text{non-housing expenditures} - \text{annual household income}, 0)$$

A household shall be considered to be in shelter poverty if $AG_{sp} > 0$. These data are then weighted and summed up to the PUMA level and parsed by type of housing tenure. This forms the basis for the calculations derived throughout.

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